DSPC-8661-PCXE

NEW

Features

- Powered by TI TMS320DM8168 SoC
- 16-ch composite video and audio inputs
- H.264 / MJPEG / RAW H/W encoding up to 480fps at D1
- H.264 / MJPEG / RAW H/W decoding up to 480fps at D1
- One HDMI supports AV display up to 1080p at 60fps
- Embedded with 1.0GHz C674X VLIW DSP
- Versatile peripherals: Giga LAN port, SATA, USB 2.0, I²C and UART
- Dual working modes: PCIe device mode and standalone mode
- Half-size form factor and fanless H/W design
- Windows / Linux PC driver and SDK with sample codes
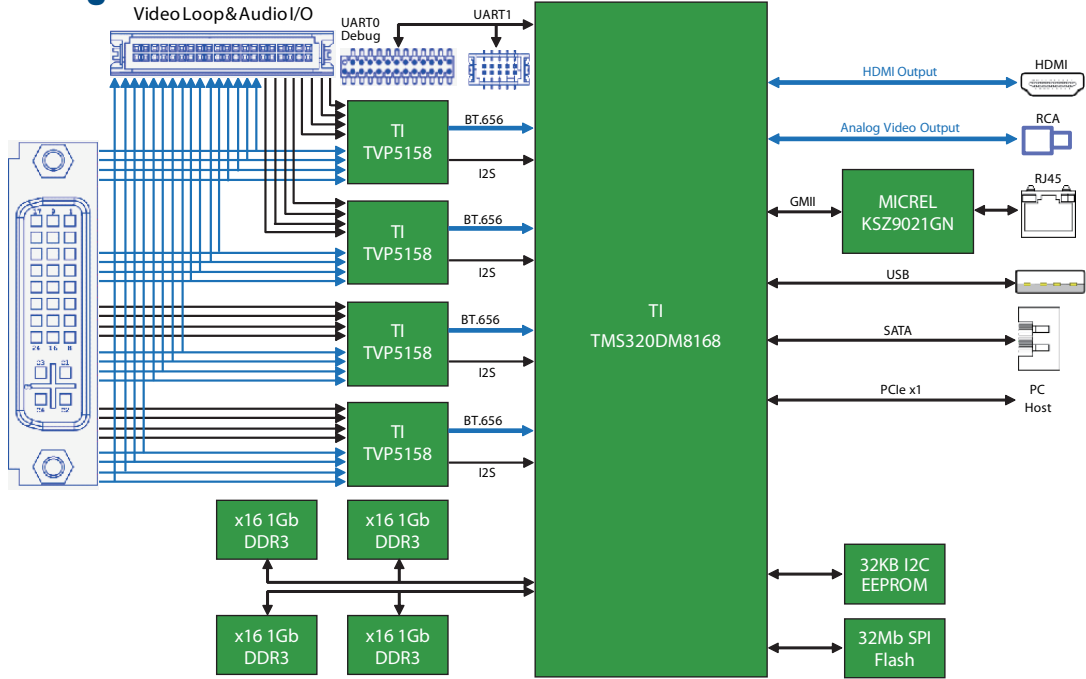
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Introduction

Design with TI TMS320DM8168 SoC, DSPC-8661-PCXE is a full-functional video processing platform with 16-ch composite video and audio inputs based on standard half-length PCIe board form factor. The board supports H.264 / MJPEG / RAW encode / decode up to D1 resolution at real-time frame rate (30/25fps) for all channels simultaneously. The HDMI provides up to 1080p 60fps video / audio outputs that fulfills the high-definition display requirements. Equipped with a high-performance C674X Digital Signal Processor (DSP), DSPC-8661-PCXE can afford a system's host processing by executing image enhancement and video analytics programs. The I²C and UART interfaces are designed for extending the control and indicator functions like RS-485 and DIO (on the optional DIO & Control Board). Furthermore, the versatile peripherals of Giga LAN, SATA and USB ports enriches the data communication, storage as well as user interface functions while the device works at standalone mode. With an easy-to-use software development kit (SDK), the DSPC-8661-PCXE is an ideal solution for system integrators to implement diverse video-processing related applications that fits a broad spectrum of customer requirements.
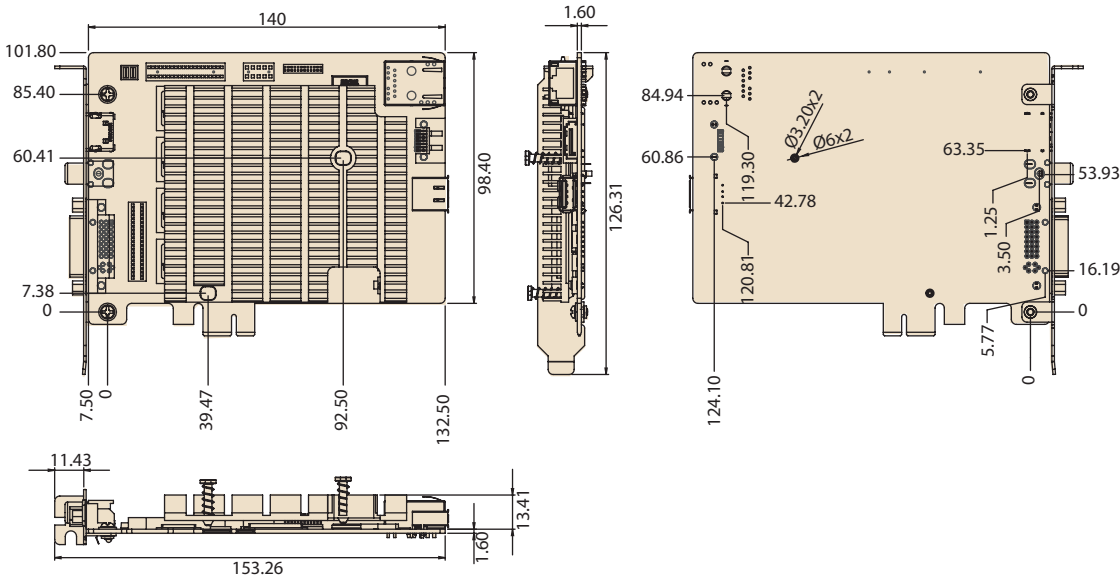
Specifications

Video Input	Channels	16
	Input Format	Composite for NTSC/PAL
	Resolution	Up to D1 (720 x 576)
	Compression	H.264/MJPEG/RAW
	Max. Frame Rate	480/400 fps (NTSC/PAL) at D1
	Bit Rate Control	CBR & VBR
	Connectors	DVI x1 (for connecting 16 x BNC + 8 x RCA to DVI octopus cable), Pin header x1 (Alternative for 16-ch video inputs)
Audio Input	Channels	8 + 8 (optional)
	Format	RAW
	Sampling Rate	Up to 16-bit, 44KHz
	Connectors	DVI x1 (8-ch audio shared with video-input connector) Pin header x1 (for connecting the optional Audio & Loop-out Board; supports the other 8ch audio-in)
Video Output	RCA	1
	Loop-out	16-ch pin header on board (connecting the optional Audio & Loop-out Board)
	HDMI out	1, resolution up to 1080P, frame rate up to 60fps
Peripherals	Giga Lan Port	RJ-45 x1
	USB 2.0 Port	A-type Female x1
	SATA Port	x1 (3.0 Gbps)
	I²C and UART	Pin-header x1 for connecting the optional DIO and Control Board
	Data Bus	PCI Express 2.0, Gen2, x1
Accessories	Cable	16xBNC + 8xRCA to DVI Octopus Cable
	Expansion Board (optional)	JTAG Debug Board (with 1x Board-to-board flat cable) Audio & Loop-out Board: Audio-out + 8ch Audio-in + 16ch Video Loop-out (with 1x Octopus Cable + 1x Board-to-board flat cable) DIO & Control Board: 16x DI + 8x DO (Relay) + 1x RS-485 (with 1x Board-to-board flat cable)
Physical Characteristics	Power Consumption	< 26W
	Operating Temperature	-20 ~ 70° C / -4 ~ 158° F (with air flow)
	Dimensions	140 x 111.15 mm (5.51" x 4.38")
Software	Supported OS by Driver	Windows XP / XPe / Vista / 7, Linux
	SDK	User's Manual, Programming Guide, Sample Codes
	Demo Program	16-ch Video Capturing and H.264 Encoding at PCIe Device Mode
Applications	PCIe Device Mode	PCIe digital video capturing & encoding card PCIe video decoder card with HDMI out PCIe DSP-based intelligent video analytics card
	Standalone Mode	Embedded IP video encoder / video recoder Embedded IP video decoder with HDMI out Embedded IP intelligent video analytics box

ADVANTECH   **Intelligent Video Platforms**

Block Diagram

Dimensions

Unit: mm

Ordering Information

Part Number	Description
DSPC-8661-PCXE	16-ch PCIe H.264 Video Capture Card with SDK
DSPC8661ACY001-E	JTAG Debug Board with cable
DSPC8661ACY002-E	Audio-in & Loop-out Board for DSPC-8661-PCXE with cables
DSPC8661ACY003-E	DIO & Control Board for DSPC-8661-PCXE with cable